



# California Market Demand Fluctuations and Trending

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# California Market Demand Fluctuations and Trending

Project Partners

Southern California Gas Company

Pacific Gas and Electric Company

- Historic Usage Data
- Forecast Data
- Gas Storage Utilization
- Hourly Trending



# California Market Demand Fluctuations and Trending

## Task Objective

“How will California meet future demand fluctuations?”

- Historic Baseline/Trends
- Consumer Usage Forecasts
- **Usage Trends – Seasonal, Daily, Hourly**
- **Impacts on Gas Storage Utilization**
- **Identify potential capacity/infrastructure constraints (if any).....Task 3: California Natural Gas Storage Deliverability Options – Alternative Technologies**

# California Market Demand Fluctuations and Trending

## Project Actions

- Collected consumer usage data in collaboration with SoCalGas and PGE.
- Researched other sources of indirect trending data collected by agencies such as CPUC, AGA, GRI, PRCI, and GSTC.
- Review, interpret, and analyze collected data.
- Establish current demand fluctuations, and formulate future consumer demand and usage trends.

# California Market Demand Fluctuations and Trending

## Project Approach

- Utilize operating data and forecasts from project partners, other forecasting agencies. Not developing a model or simulation program...
- Establish variations by extrapolating historic trending with forecasted usage. Seasonal.....Hourly
- Identify impact of growth segments on usage profiles. EG
- Focused capacity/infrastructure enhancements

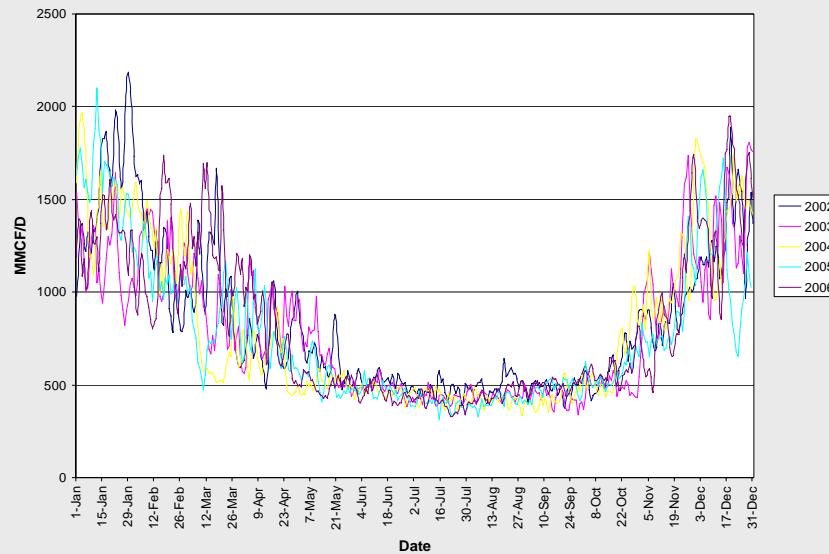
# California Market Demand Fluctuations and Trending

## Project Outcomes

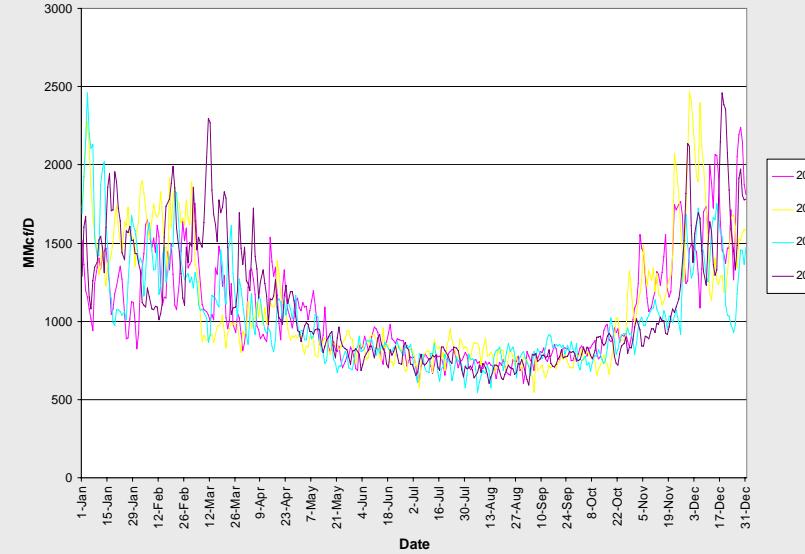
- Historical Trending by Market Sector

Example.....Core (residential, commercial) consumer usage

North Region Historic Core Usage Trend



Southern Region Historic Core Usage

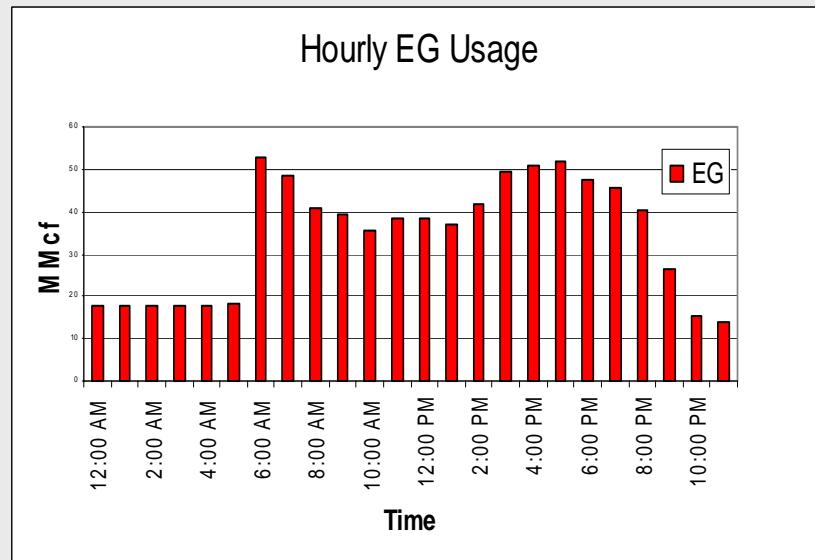
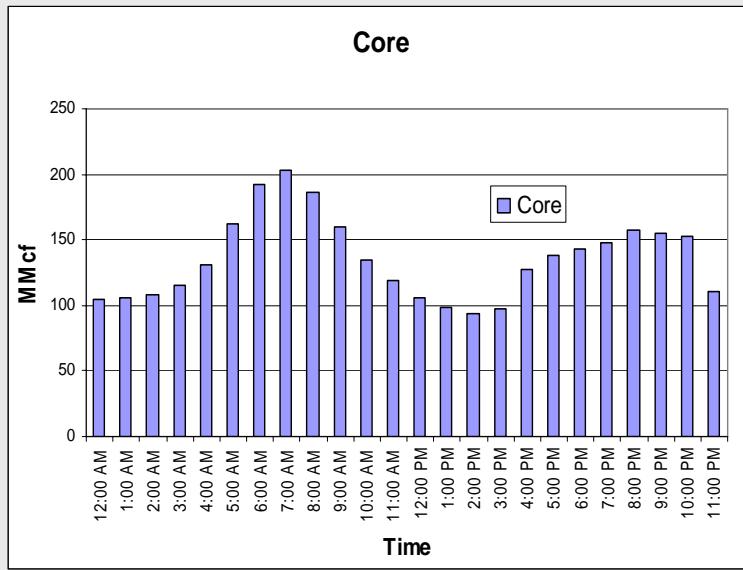
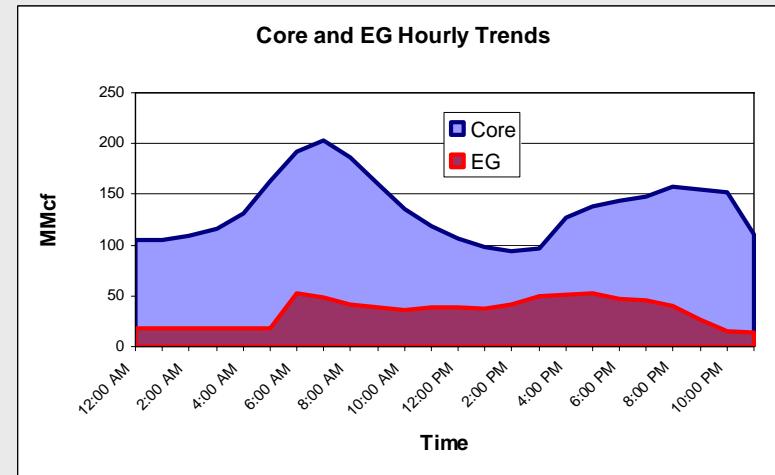


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## Project Outcomes

- Historical Trending – Hourly Data

Example.....South Region

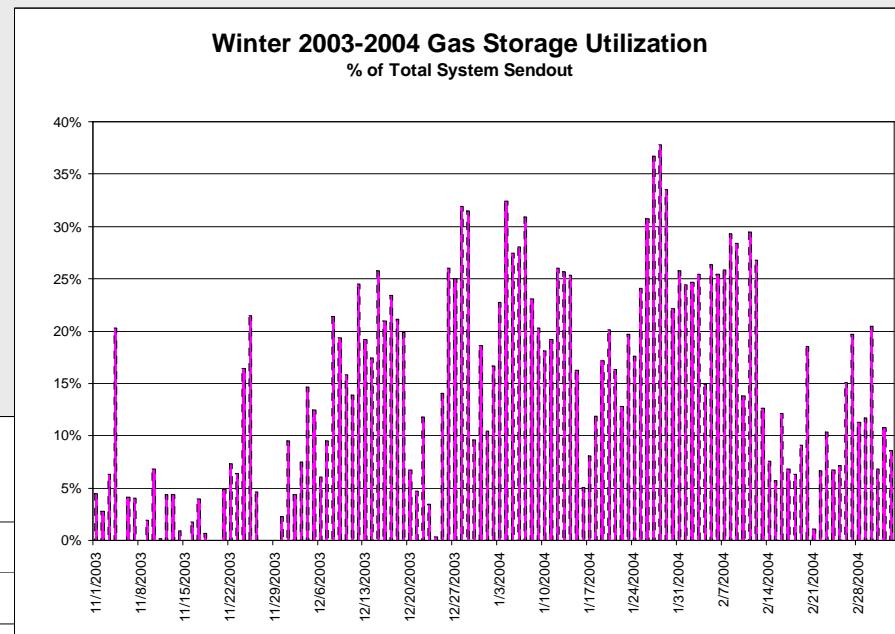
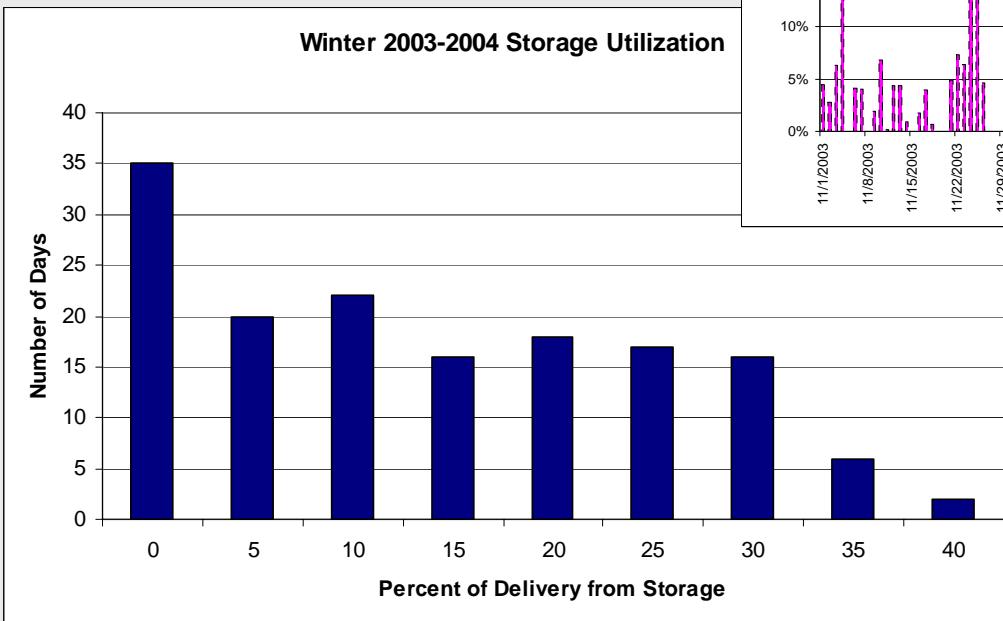


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## Project Outcomes

- Gas Storage Utilization

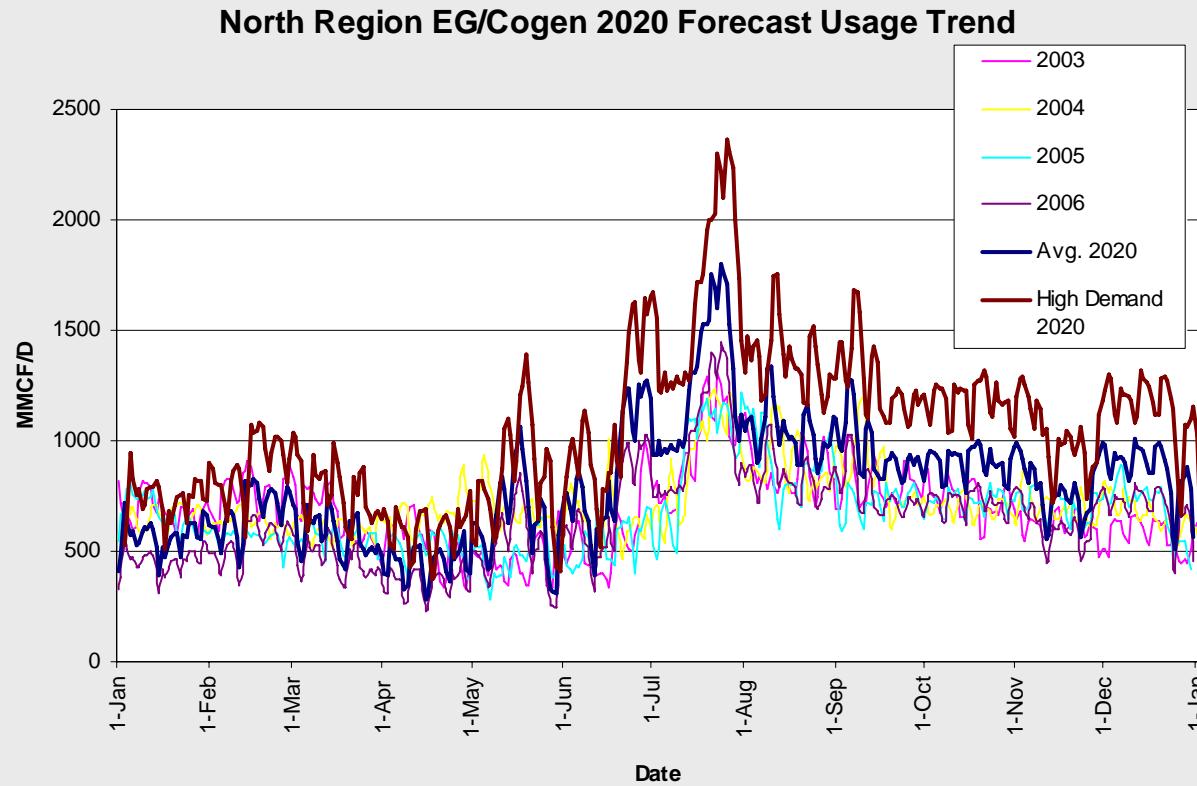
Example.....North Region



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## Project Outcomes

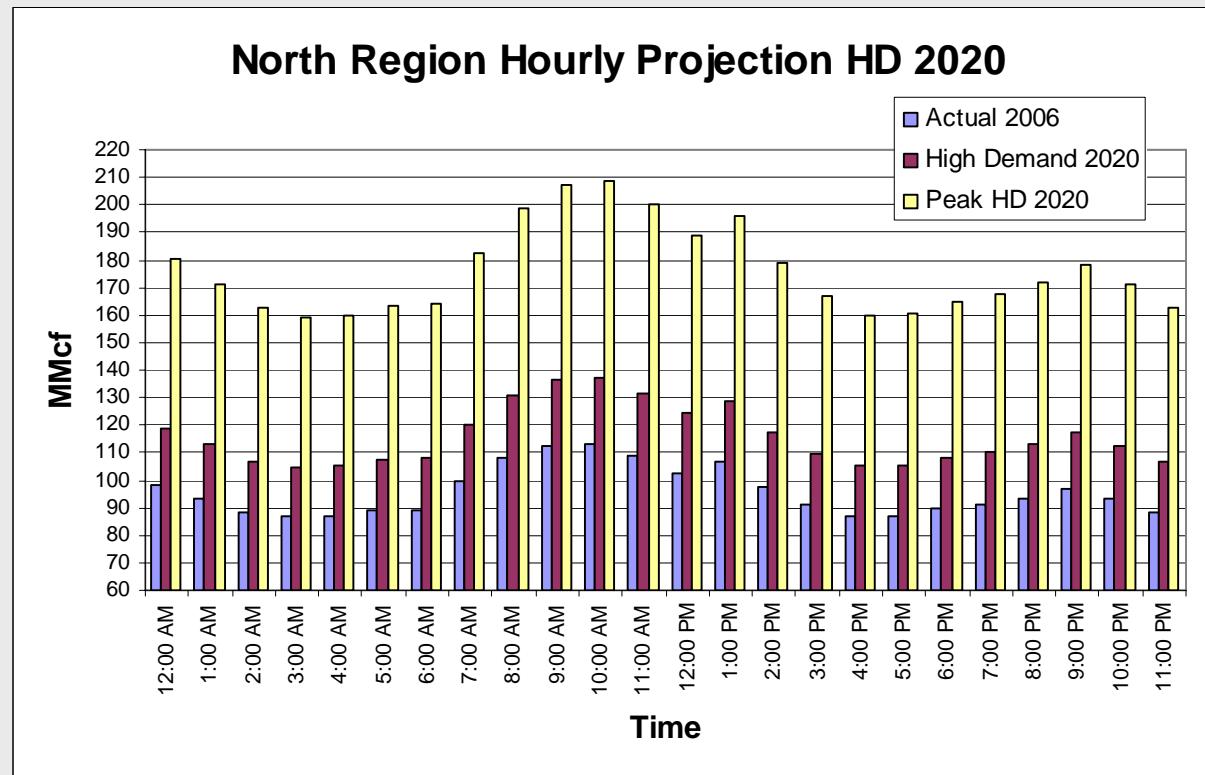
- Forecast Trending.....North Region EG&Cogen



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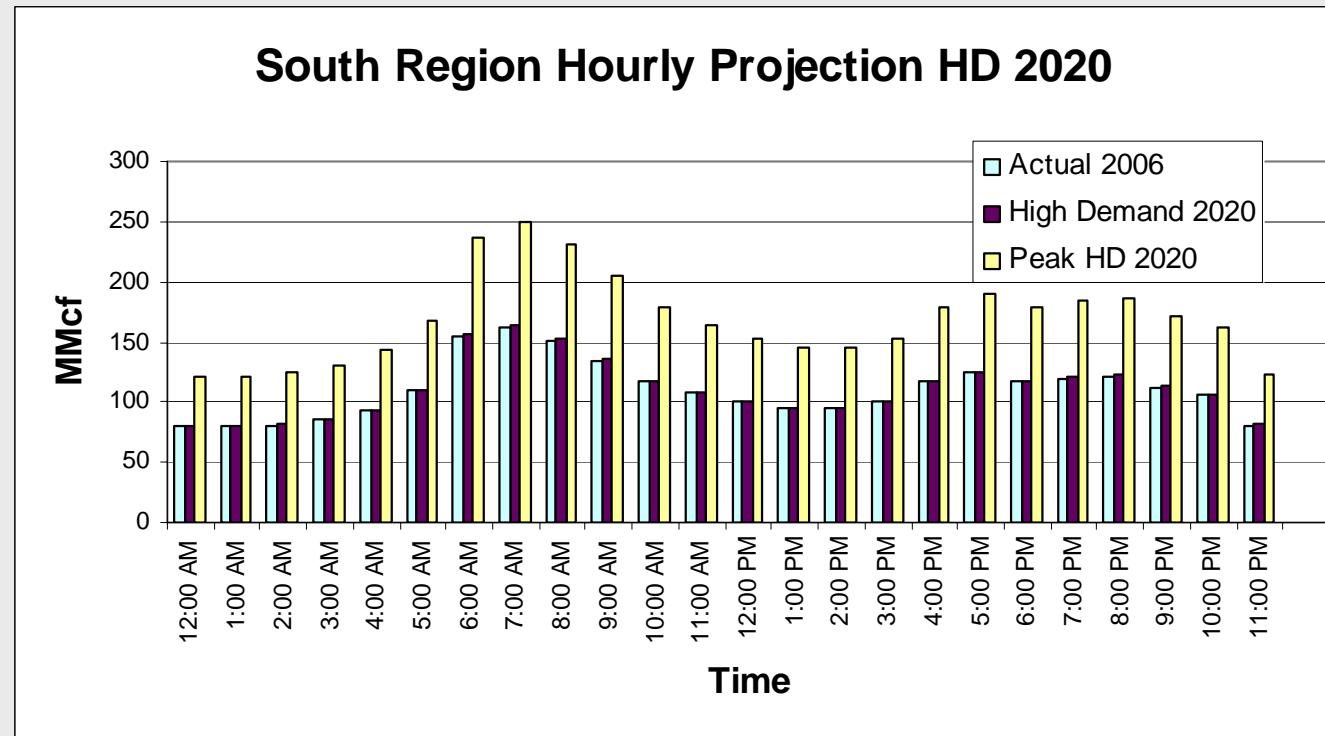
- Forecast Trending.....North Region Peak Day Hourly Demand



# California Market Demand Fluctuations and Trending

## Project Outcomes

- Forecast Trending.....South Region Peak Day Hourly Demand



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## Project Outcomes

### Key Trends/Data

- 2020 HD Forecasted Peak Day – 8,270 MMcf/D
  - North Region – 4225 MMcf/D
  - South Region – 4045 MMcf/D
- Hourly Trending
  - North Region – 616 MMcf in 3 hour window
  - South Region – 923 MMcf in 4 hour window
- Gas Storage Utilization
  - Average 40% Peak Day Contribution

# California Market Demand Fluctuations and Trending

## Project Outcomes

### Focus Areas for Advanced Gas Storage Technology Research

- Gas Storage Deliverability Enhancement
  - Maintain price leveraging capability
- Alternative Gas Storage Technology Focus
  - Point Source Supply – Distributive Energy
  - Supplement Distribution Supply



**Creating  
technology solutions  
with impact**

▼  
**across the  
energy spectrum**



**Thank You!**

*For more information:*

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